

NWS FORM E-5 (11-88) (PRES. BY WSOM E-41)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) WFO Jackson, Mississippi
MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS		REPORT FOR: MONTH YEAR February 2004
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283		SIGNATURE Alan Gerard, MIC In Charge of HSA DATE March 10, 2004

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (WSOM E-41)

Synopsis...

February was characterized by an active southern branch of the jet stream. Rainfall was substantial during the month especially over southern and eastern sections of the HSA.

The 1st system to affect the area occurred on the 2nd. An upper level trough and an associated surface cold front pushed rapidly across the area. Rainfall amounts were .25 inches or less.

Our 2nd system, from late on the 4th into the 5th, happened to be the most significant event of the month. A deep upper level trough pushed east with a surface low pressure area over the Southwest Louisiana Coast. A surface boundary set up from southwest Mississippi to just north of Meridian. Rainfall amounts along this boundary ranged from 3 to 8 inches. Some heavier 18 hour rainfall totals were: 7.65 inches at Okatibbee Reservoir, MS; 7.60 inches at Damascus, MS; 7.20 inches at Chunky, MS; 6.74 inches at Crystal Springs, MS; 6.48 inches at Mize, MS; 6.46 inches at Philadelphia, MS; 6.41 inches at D'lo, MS; 6.22 inches at Collinsville; 6.21 inches at Newton, MS; 6.20 inches at Brookhaven, MS. Rainfall over the remainder of the HSA ranged from 1 to 3 inches. Water spilled over Robins Lake Dam in southern Adams County during the day on the 5th; however, quick action by local officials and cessation of heavy rainfall kept the dam from failing. Significant flash flooding occurred in the City Of Richland, MS in the vicinity of Richland Creek. From the 6th to 8th, much cooler and drier air covered the area.

A period of unsettled weather prevailed from late on the 9th to the 15th. Another upper level trough began digging into the southwest United States. A stationary surface frontal boundary set up along the Gulf coast. Warm moist gulf air began pushing north over cooler air at the surface on the 10th and 11th. A line of heavy rainfall set up across South Mississippi from Brookhaven, MS to Collins, MS. Some 24 hour rainfall amounts over this area included: 3.83 inches at Collins; 3.70 inches at Prentiss, MS; 3.68 inches at Meadville, MS; 3.45 inches at Pat Harrison Waterway's Big Creek Water Park, MS; 3.35 inches at Monticello, MS; and 3.30 inches at Brookhaven, MS. The heaviest rainfall actually occurred in less than 12 hours. From the 12th to the 15th, a strong closed upper level low pressure system began pushing east. A surface low pressure system formed in the north central Gulf of

Mexico late on the 13th, pushing light to moderate rainfall over the HSA. As the upper level low pressure area pushed east on the 14th across southeast Arkansas and northern Mississippi, moderate rainfall formed over these area. By late on the 14th and early on the 15th, snow began falling over southeast Arkansas and northern parishes of Northeast Louisiana. Snow accumulations ranged from 1 to 3 inches. As the low moved into Mississippi, rainfall mixed with snow occurred in the most northern sections of the Jackson HSA. Little or no snow accumulations were reported. Rainfall ranged from .50 inches over the south to over 1.50 inches in the northern portions of the HSA.

From the 16th until the 22nd, the only rainfall was associated with a weak upper level trough that pushed through the area on the 17th. Rainfall was reported over Northeast Louisiana and Southwest Mississippi. Rainfall amounts were generally less than .25 inches. Next, a cold front pushed through the area from late on the 20th into early on the 21st. No rainfall was associated with this front.

A period of unsettled weather was noted from the 23rd until the 26th. Late on the 22nd into early on the 23rd, a warm front set up across southern Louisiana. Warm moist air pushed over cooler air at the surface producing a band of heavy rainfall in the early morning hours over southern Mississippi and southern portions of Northeast Louisiana. From the 24th into the 25th, a series of low pressure centers developed in the northern Gulf once again producing heavy rainfall over southern portions of Mississippi. The heaviest band occurred from near Bude, MS to Hattiesburg, MS to Richton, MS. Heavy rain caused flash flooding of streets and some homes in Petal, MS near Hattiesburg. Some flooding of homes also occurred in Eastern portions of Lamar County in low lying areas. An upper level low pressure pushed across Central Mississippi from the 25th into early on the 26th, moderate to heavy rainfall occurred over eastern and northern portions of Mississippi as well as southeastern Arkansas and northern portions of northeast Louisiana. Rainfall total for the 84 hours ending at 7am on the 26th ranged from 1.75 inches in Central Mississippi to 6.50 inches in Southeast Mississippi. Some 84 hour rainfall totals: 6.49 inches at Sumrall, MS; 6.40 inches at Hattiesburg, MS; 5.06 inches at Purvis, MS; 4.67 inches at Columbia, MS; 4.56 inches at Brookhaven, MS; and 4.31 inches at Monticello, MS. The HSA experienced nice weather through the remainder of the month.

River and Soil Conditions...

Soil moisture was at or above normal at the beginning of the month. By the end of the month, soil moisture had increased to above normal levels over all sections of the HSA.

Moderate flooding occurred along the Middle and Upper Big Black River Basin, Tuscolameta Creek, Upper Pearl River, Strong River, Tallahala Creek, Chunky River, and the Upper Chickasawhay River during the month. Minor flooding was noted in all HSA river basins with the exception of river basins in Northeast Louisiana and Southeast Arkansas. See E-3 report for crest information.

With above normal soil moisture conditions and near normal rainfall

expected for the next 60 to 90 days, flood potential will be above normal over river basins in Mississippi and slightly above normal over Northeast Louisiana and Southeast Arkansas river basins.

Rainfall for the month of February...

<u>RIVER BASIN</u>	<u>RAINFALL</u>	<u>DEPARTURE FROM NORMS</u>
Southeast Arkansas (Chicot & Ashley counties)	8.25 to 9.58 inches	Well above normal.
Northeast Louisiana (Tensas, Boeuf, Bayou Macon & Lower Ouachita)	6.75 to 7.75 inches northern sections 7.25 to 10.25 inches central sections 9.00 to 10.75 inches southern section	Well above normal. Well above normal. Well above normal.
Lower Yazoo	7.25 to 9.00 inches	Well above normal.
Big Black	7.00 to 8.00 inches upper basin 5.75 to 8.50 inches middle basin 6.25 to 7.75 inches lower basin	Well above normal. Above to well above normal. Above to well above normal.
Homochitto/ Bayou Pierre	6.00 to 12.00 inches	Above to well above normal.
Pearl(abv Jackson)	6.00 to 10.25 inches	Above to well above normal.
Pearl(Blo Jackson)	6.50 to 15.50 inches	Well above normal.
Pascagoula	7.50 to 12.75 inches over the Leaf basin. 10.00 to 10.25 inches over the Black Creek basin. 7.00 to 10.75 inches over the Chickasawhay	Well above normal. Well above normal. Well above normal.
Tombigbee tributaries in the JAN HSA	7.25 to 10.00 inches	Well above normal.

The heaviest rainfall amounts in the HSA for the month were: 15.52 inches at Brookhaven, MS; 14.37 inches at Prentiss, MS; 13.20 inches at Monticello, MS; 12.85 inches at Mize, MS; 12.69 inches at Sumrall, MS; 12.27 inches at Collins, MS; 12.07 inches at Meadville, MS; 11.99 inches at Union Church, MS; 11.36 inches at Hattiesburg, MS; 11.28 inches at Pat Harrison Waterway's

Dry Creek WP; and 11.11 inches at Crystal Springs, MS.

At the Jackson WFO, the February monthly rainfall was 6.49 inches, which was 1.99 inches above normal. Total rainfall for the year was 10.72 inches, which was 0.55 inches above normal.

At Meridian Key Field, the February monthly rainfall was 8.01 inches, which was 2.66 inches above normal. Total rainfall for the year was 11.06 inches, which was 0.21 inches below normal.

Mississippi River...

The Mississippi River from Arkansas City to Natchez continued to fall for the first several days of February. The river then experienced a rise until it crested between the 18th and 21st of the month. After cresting, the river continued to fall until the end of the month. The river was above seasonal norms from the end of the first week of the month until the beginning of the last week of the month. The provisional high and low stages for February are listed below:

Location	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	27.92	02/18	14.23	02/04
Greenville, MS	39.71	02/18	25.87	02/05
Vicksburg, MS	34.38	02/20	20.89	02/05
Natchez, MS	42.16	02/21	29.42	02/05

Products issued...

Total Flood Warning products issued: 39
Total Flood Statement products issued: 272
Daily Rainfall Products (RRA'S) issued 29
Daily River Forecast Products (RVS'S) issued: 29
Daily River Stage products (RVA'S) issued 29

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Service Hydrologist

Note: Stage and precipitation data was furnished with cooperation from Mississippi, Louisiana, and Arkansas, N.W.S. Cooperative Observers, United States Geological Survey, United States Army Corps of Engineers and the Pearl River Valley Water Supply District, Pat Harrison Waterway District, Pearl River Basin Development District and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District

*USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
LMRFC
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District*